WASHINGTON ENVIRONMENTAL COUNCIL

wecprotects.org

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October 14, 2022

Chair Tony Doan
Washington State Building Code Council
1500 Jefferson St SE
Olympia, WA 98501

Re: Residential Energy Code proposals

Chair Doan and Members of the State Building Code Council:

Thank you for the opportunity to provide comments on proposed updates to the Washington State Residential Energy Code. As a statewide advocacy organization, the Washington Environmental Council (WEC) works to develop, advocate, and defend policies that ensure environmental progress and justice by centering and amplifying the voices of the most impacted communities. WEC strongly supports the proposed residential energy code updates under consideration by the State Building Code Council, particularly the requirements for heat pump systems in new homes and stricter ventilation for gas stoves to protect indoor air quality and health. We urge the Council to vote to approve the full package of proposals.

There is increasing evidence of the public health risks of burning fossil fuels indoors. A study published this June by the Harvard T.H. Chan School of Public Health and partners found that consumer-grade natural gas contains varying levels of at least 21 different volatile organic chemicals that when leaked are known to be toxic, linked to cancer, and form secondary health-damaging pollutants such as particulate matter and ozone.[1] Combustion of natural gas indoors also emits significant quantities of NOx, which the American Lung Association warns can cause reduced lung function, a greater likelihood of emergency department and hospital admissions, and is likely to be a cause of asthma in children.[2]

The health risks of heating buildings with fossil fuels don't stop with indoor air quality. Last month, the California Air Resources Board adopted a State Implementation Strategy to achieve statewide attainment of the federal National Ambient Air Quality Standards (NAAQs) for outdoor ground-level ozone (aka, smog). States are required by the federal Clean Air Act to meet or exceed the NAAQs for the protection of public health and the environment.

As part of its strategy, California will begin development of a rule to adopt a zero-emission standard for space and water heaters by 2030. This standard will heavily rely on heat pump technologies. In California, natural gas combustion in residential and commercial buildings is responsible for approximately 5 percent of statewide NOx (a class of harmful pollutants that are also precursors of

[1] https://www.hsph.harvard.edu/c-change/news/natural-gas-used-in-homes/
[2] https://www.lung.org/clean-air/outdoors/what-makes-air-unhealthy/nitrogen-dioxide

ground-level ozone) emissions. Furthermore, California's buildings emit about 66 tpd of NOx to the ambient outdoor air, which is approximately four times the emissions from electric utilities and nearly two-thirds the emissions from light-duty vehicles statewide.[3] Investigations in other states have reached similar conclusions about the *outdoor* air quality impacts of burning natural gas indoors.

In addition to public health concerns, fossil fuel combustion in residential buildings is responsible for about six million metric tons of carbon dioxide equivalent emissions each year in Washington. Building new homes with fossil fuel appliances will only increase these emissions at a time when we desperately need to be cutting our climate pollution. In recent years, we have seen the direct impacts of climate change in the shape of unprecedented wildfires, droughts, and heat waves which have cost hundreds of lives and have had untold economic impacts across the state. In the face of the climate emergency, it is critical that officials at all levels of government pass the policies needed to reduce emissions, protect our communities from further harm, and foster resilience.

Finally, Washington's 2021 State Energy Strategy found that electrifying buildings will be the lowest-cost pathway to meeting the state's climate goals of reducing emissions 95% from 1990 levels by 2050. By statute, Washington's energy code is required to become increasingly more efficient every revision cycle so that new buildings in 2031 are 70% more efficient than those built in 2006. Because there are only four code cycles between now and the 2031 code, it is essential that each revision maximizes what can be done to make buildings more efficient and transition away from fossil fuels.

The heat pump proposals on the table help get us there; most significantly, electric heat pumps systems are more efficient than fossil fuel options and eliminate on-site fossil fuel combustion. Moving to highly-efficient heat pump technology can reduce energy use for heating and cooling homes, especially in comparison to outdated window air conditioning units. And as we continue to see peak temperatures rise in the northwest, more and more people will need air conditioning – which heat pumps provide alongside heating – to cope with heat-related health impacts, or to adequately cool their homes while they are shut inside due to wildfire smoke.

For these reasons, we reiterate our support for the full package of proposed residential code amendments, including heat pump and ventilation proposals. Thank you for your consideration of these comments, and thank you to the State Building Code Council for your commitment to the difficult and critically important work of adopting building, mechanical, fire, plumbing, and energy codes that protect the health, safety, and welfare of all Washingtonians.

Sincerely,

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[3] https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf